Nutrition News

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NUTRITION AND YOUR TEETH

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Investigators would unquestionably agree that a highly satisfactory diet for all persons at all ages is a major factor in attaining the goal of preventive dentistry, preventive medicine, and good nutrition. Such a diet is of importance not only from the standpoint of general health, but also of making the best teeth possible in the face of personal idiosyncracies.

Hereditary dental defects apparently manifest themselves as other physiological defects do, so optimum diet is not a panacea for all dental problems. It is probable that diet plays its greatest role in building good teeth during the first ten years of life.

Better Dental Health

Two practical suggestions for good dental health are:

1. If an individual is susceptible to tooth decay, he should reduce his intake of all sweet foods to a minimum. In this way he will keep the flora of his mouth low in those organisms known to be acid formers. Starches and fats should be his main energy foods.

2. In addition to keeping the intake of sweet foods low, each person should plan his diet so that all factors, including vitamin D, are present in abundance.

Each adult must do these things for himself, and not expect a panacea for his dental disorders. The soundest policy, perhaps, is to urge moderation in, rather than abstinence from sweets, and admit that some tooth decay will probably result even though the individual has the best possible personal and professional mouth hygiene care.

Dental Research

In the light of constant dental research we are forced to change some of our ideas about tooth health and prevention of dental caries. That nutrition is a factor is certain, although it is not all of the story.

Dental caries has been on the increase for generations. About 95 per cent of our population is affected by it. Those who are immune are intrinsically different. Apparently they may have hard teeth or soft, eat good or poor diets, care for or neglect their teeth, but their teeth do not decay.

It seems that foods comprising the diet determine in great measure the flora of the mouth, and certain mouth organisms produce an acid, or acids, that decalcify tooth enamel.

Prevention of caries by diet has been confused with the promotion or retardation of growth and well being as a result of certain experiments with adequate and inadequate diets. Undoubtedly the very low intake of sweet foods in both regimens accounts in part for the low incidence of tooth decay observed. Starchy foods which pack in and around the teeth such as crackers and soft, spongy bread may be factors in decay.

There are two schools of thought regarding the bacteriological problems involved in dental caries, but they are in agreement that a diet containing liberal amounts of sweet foods is, as a rule, more conducive to tooth decay than a diet low in sweet foods.

Retention of food and bacteria around the teeth, however, is not the sole cause of their destruction. Systemic health seems to play a part in dental health. For instance, feeding adjustments and nutrition upsets in infancy,

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with consequent metabolic disturbances, may cause hypoplastic defects in the enamel of the permanent teeth forming at that time. No amount of dietary regulation or calcium therapy will ever correct the enamel defects once they occur.

Research shows us that dental caries during pregnancy is not due to pregnancy as such, although mouth hygiene and food habits may be quite a problem. Enamel and dentin do not serve as storehouses for calcium, and withdrawal does not occur even during severe upsets in calcium metabolism.

The cause of dental caries is an exceedingly complex problem, but continued research will unquestionably bring about as satisfactory an understanding of the many factors involved as it has in the case of nutritional diseases.

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Glances AT NUTRITION RESEARCH

The following reviews of current nutrition research give an indication of the types of problems studied today. As the facts are made available they are applied by professional leaders for the general public through various educational media.

Vitamin A Content of Dehydrated Eggs—Due to the very large quantities of dried eggs shipped to our armed forces and allies, it is essential to know whether the nutritive value of eggs is lowered by the drying process. Vitamin A, as one of the most stable food factors, was selected for study. Analyses indicate that losses of vitamin A are very small and losses of carotene do not exceed 5 per cent. The samples tested averaged approximately 44 I. U. per gram on a moisture-free basis.

Science 96:536 (Dec. 11) 1942.

Trace Elements—Six elements—iron, copper, iodine, manganese, cobalt, and zinc—have been demonstrated to be essential to animal life. These indispensable "traces", just as the vitamins, appear to be keys to fundamental processes. The mechanisms of these processes are only partially understood or, in most cases, completely unknown.

J.A.M.A. 120:609 (Oct. 24) 1942.

Biotin in Human Nutrition—Observations indicating that biotin may be of significance in human nutrition have been reported. Biotin is one of the members of the vitamin B-complex. Other members of the complex (thiamine, riboflavin, and niacin) are already known to be indispensable to human beings.

A group of volunteer subjects was fed diets containing minimal amounts of biotin. Egg white, which prevents absorption of biotin from the intestinal tract, supplied 30 per cent or more of the total daily caloric intake. Thiamine, riboflavin, nicotinic acid, pyridoxine, calcium pantothenate, ascorbic acid, vitamin A, ferrous sulfate, and calcium lactate were given as supplements. Symptoms of biotin deficiency were rapidly relieved by the administration of a biotin concentrate. Biotin appears to be definitely of importance in human nutrition. An adequate diet which provides ample amounts of thiamine, riboflavin, and nicotinic acid will probably contain sufficient biotin, assuming that the supply is not reduced by excessive amounts of egg white.

J.A.M.A. 118:1199 (April) 1942.

Feeding Healthy Infants and Children—Breast feeding of infants remains a desirable procedure. However, modern refinements of artificial feeding with cow's milk make this method of feeding infants fully adequate. With either type of feeding the infant requires early supplementation of his milk diet—especially with sources of vitamins C and D. Additional supplementary foods, including fortified cereals, egg yolk, fruits, and vegetables, should be given gradually, beginning at three months of age. During childhood, vitamin D, protein, and calcium deserve special emphasis. Vitamin D milk is a good source of all three of these essentials. Children should receive one and one-half pints to one quart of milk daily from infancy throughout adolescence.

J.A.M.A. 120:913 (Nov.) 1942.

TIMELY TOPICS

Dr. Simmonds

Dr. Nina Simmonds, author of the leading article in this issue, is Lecturer in Medicine and Nutrition, College of Dentistry, University of California at San Francisco, teaching nutrition and what it has to offer the medical and dental professions. Dr. Simmonds was previously associated with Dr. E. V. McCollum at The Johns Hopkins University, collaborating with him in the preparation of several books.

New Agriculture Bureau

A new Bureau of Human Nutrition and Home Economics of the United States Department of Agriculture has been organized with Dr. Henry C. Sherman, formerly of Columbia University, as Chief. This new Bureau consolidates the Bureau of Home Economics and the Division of Protein and Nutrition Research of the Bureau of Agricultural Chemistry and Engineering. Immediate expansion of nutrition and food research is scheduled.

Nutrition Investigation

Dr. Lydia J. Roberts spent January and February in Puerto Rico carrying on an investigation of nutrition education at the request of Mr. M. L. Wilson, assistant director in charge of nutrition, Office of Defense Health and Welfare Services. Dr. Roberts is head of the home economics department, The University of Chicago, and is a member of the Food and Nutrition Board, National Research Council, and the Council on Foods and Nutrition, American Medical Association.

NUTRITION ON THE HOME AND SCHOOL FRONT

Victory vs. Black-Out Lunches

By Geraldine H. Moorman, Head, Home Economics Department
Arsenal Technical Schools, Indianapolis, Indiana

"Home Economics Department Backs Campaign for Nutritional Needs." Thus the "Arsenal Cannon", school paper distributed to 5593 high school students, announced a well-planned nutrition project. The aims of the project were:

1. To give simplified practical standards for buying a lunch.

2. To present standards and educational facts to the student body.

3. To set up a constructive tray checking system to assist pupils in making practical use of these facts in selecting nutritious lunches.

An etching in this issue of the paper, made by the Art Department, with General Nutrition's Army led by Mr. Milk, made an impressive patriotic appeal.

The Art Department also provided a large campus signboard and 200 classroom posters, "Have You Seen the Yardstick?" which attracted much attention.

Just after these posters appeared, a clever radio skit explaining how to use the nutrition yardstick, written by the Social Arts Classes, was broadcast on the School Public Address System to all classrooms. Immediately after the broadcast, all students received an "Extra Bulletin—All About Nutrition on the Home and School Front." The Yardstick was explained again inch by inch, and suggested menus for Victory Lunches were given.

A few days later, girls trained in food classes checked the trays of pupils as they came through the lunch lines. The School Print Shop had made two cards. The Victory Lunch Card (white card, red letter "V", with printing in blue ink) read as follows:

THIS VICTORY LUNCH includes
MILK—one-half pint to drink or cooked in two foods.
A FRUIT OR VEGETABLE other than potatoes.
A SUBSTANTIAL FOOD
A HOT FOOD
EAT TO WIN

The Black-Out Lunch Card (bordered in black ink and with heavy black lettering) explained the Black-Out Lunch.

This is a BLACK-OUT LUNCH
Something is missing!
Is it MILK, one-half pint either to drink or cooked in two foods?
Is it a FRUIT or a VEGETABLE other than potatoes?
Is it a SUBSTANTIAL FOOD?
Is it a HOT FOOD?
Won't you choose a VICTORY LUNCH tomorrow?

Black-Out Cards were passed out liberally the first two days. Because more than 3000 pupils have lunch each day in the school cafeteria, only every third or fourth tray could be checked without retarding the lines too much. Pupils showed considerable interest by asking to have their trays checked. A surprise checking followed this part of the program a few weeks later.

An exhibit of carefully selected, well-packed lunches gave many helpful ideas to students who carry their lunches. Bulletins explaining wise food selection were distributed from booths in the cafeteria. The local Dairy Council supplied many educational posters and bulletins for distribution.

A radio quiz program, summarizing the main objectives, indicated the educational value of this nutrition project to 4500 pupils.

75% knew that poor nutrition of Americans was due to poor food selection.

71% indicated that **one quart** of milk should be included in every growing boy's and girl's diet. (Milk orders have increased in the school lunchroom.)

72% knew that two vegetables besides potatoes should be included in the daily diet. (Vegetable orders have increased in the lunchroom.)

44% knew that at least two servings of fruit should be included in our diet each day.

61% reported they had improved their diet as a result of information gained.

PROTECTING THE HEALTH OF WAR WORKERS

By Dr. Robert S. Goodhart, Technical Adviser, Nutrition in Industry, Nutrition Division
Office of Defense Health and Welfare Services

Every individual in an essential industry must be kept, insofar as possible, at the peak of working efficiency. It is fundamental that he be maintained in good health if his energy output is to be kept at its best for any period of time. The maintenance of health involves many factors which we cannot afford to neglect. Perhaps least of all can we afford to ignore the importance of nutrition.

The prime function of the Nutrition Division, Office of Defense Health and Welfare, is the education of the American people so that everyone will make the best possible use of available foodstuffs to meet his nutrition requirements.

The Nutrition in Industry Section of the Nutrition Division functions mainly through the eleven regional nutrition representatives and the State and local nutrition committees. Arrangements have been made for the appointment of an assistant nutrition representative for nutrition in industry, in each region. They co-operate with industries and nutrition in industry committees on meeting problems affecting nutritional health of workers.

State Nutrition Committees are forming sub-committees on Nutrition in Industry. The membership of these sub-committees generally includes representatives from health departments, labor, service clubs, newspapers, and industrial physicians, food producers, merchants, and caterers, in addition to nutritionists.

The sub-committees provide the nutrition committees with a direct contact with those groups in a position to implement their recommendations. Such sub-committees are also qualified to define the needs of industries and war workers in their communities. State industrial hygiene officers play an important role in Nutrition in Industry programs within their States.

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DID YOU KNOW ?

—that ice cream is a nutritious food? It furnishes calcium, vitamin A, riboflavin, protein, and other nutrients found in milk.

—that India, next to China, is the largest rice producer in the world?

—that someone has taken the trouble to figure that the annual U. S. milk supply would fill a river 3,000 miles long, 40 feet wide, and 2½ feet deep?

—that sugar, unknown to the Greeks and Romans, was introduced into Europe as a medicine?

—that today more than 80 per cent of the butter is manufactured in creameries? A third of a century ago most of the butter was made on the farms.

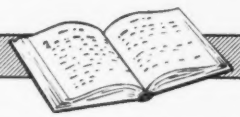
—that modern dehydration can reduce 80 pounds of peas to 15 pounds in less than ten hours?

—that cheese, honey, and beeswax were among the chief barter products used by prehistoric Europeans living in the Alps?

—that out of every seven and a half dozen eggs produced in the U. S. this year, at least one dozen will be dried to supply Lend-Lease needs?

—that milk heads the list of farm products which give the farmer a cash income?

THINGS YOU'LL LIKE TO READ



THE MEANING OF NUTRITION — Harriet Stone. Little, Brown and Company, 1943. 44 cents.

New nutrition booklet presenting fundamental information about good nutrition in interesting and understandable style. Of value to adult study groups as well as high school students.

RECOMMENDED DIETARY ALLOWANCES — National Research Council. Reprint and Circular Series, Number 114, January 1943. Free.

This bulletin gives the revised Food and Nutrition Board dietary allowances and the basis for their selection. It also presents plans that meet these allowances.

NUTRITION FOR YOU! — Walter Wilkins and French Boyd. Published by authors, 1943. Office of Defense Health and Welfare Services, Washington, D. C.

Simple, well-organized presentation of what to eat and why. Of value to nutrition leaders, members of study groups, homemakers, students of home economics.

HOW TO WIN ON THE HOME FRONT—Helen Dallas. Public Affairs Pamphlet Number 72. Public Affairs Committee, 1942. 10 cents.

Good over-all picture of the homemaker's problems of buying wisely in wartime in simple concise form.

PROTECTING THE HEALTH OF WAR WORKERS

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The Nutrition in Industry Section co-operates with the Industrial Hygiene Division of the United States Public Health Service and the Ordnance Branch of the United States Army by including inspection of meals, feeding conditions, and requirements in industrial hygiene surveys of Army Ordnance plants. Reports prepared on nutrition conditions in these plants are transmitted to the Army Ordnance headquarters as integrant parts of the regular industrial hygiene reports.

A National Labor Advisory Committee has been set up representing unions within labor organizations. The Nutrition in Industry Section is in constant touch with each representative regarding any matter within affiliated organizations. To assist this program, news and feature articles are provided regularly to the labor press.

Twelve hundred industrial magazine editors and persons at many other industrial plants are supplied a variety of items each month for use in employee publications and on bulletin boards. Weekly releases are also sent to editors of women's pages of newspapers. All releases are sent in response to written requests and distributed by the Office of War Information.

The great burden of work is, and must be, borne by the State and local nutrition committees with their subcommittees on nutrition in industry. The States' nutrition organizations are qualified and willing to aid industry and labor in setting up and running effective nutrition programs. Industrial physicians are strongly urged to call upon them for the services they are prepared to give.

A MARKET BASKET SERVICE

By Blair Williams, Nutritionist
Vermont Department of Public Health

A "market basket" service to help homemakers adjust to irregular and unfamiliar food supplies and still serve appetizing, well-balanced meals has been successful in two groceries in Springfield, Vermont.

Members of the Red Cross Canteen Corps were stationed in these stores to answer questions and make suggestions to shoppers. During the first week, meat substitutes and meat-extending foods were put on display. Recipes describing ways to use less well-known variety meats were distributed. Each day, three menus were posted to show meals that could be planned from foods in the store. This service was available on the two big shopping days in each store.

The second week, the emphasis was on the value of a well-planned lunch box. Directions for packing an interesting and nourishing lunch were provided. This close, practical tie-up between current food supplies and educational material makes the market basket service especially helpful.